

Serial No. 10/055,224
Amendment Dated 02/08/05
Reply to Office Action of September 9, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-3 (canceled)

Claim 4 (Currently Amended): An apparatus for producing a cellulose paper pulp from a biological mass, the apparatus comprising:

(a) a tower means for sterilizing the biological mass to form a culture medium;

(b) a first screw means disposed at an outlet of the tower for mixing the culture medium from the tower with an inoculum in a sterile environment to create an inoculated mass;

(c) a first conditioning and reaction chamber disposed adjacent the screw for receiving the inoculated mass and having

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means for mixing and handling the inoculated mass in a sterile environment with a controlled temperature, pH and atmosphere comprising CO₂ and O₂, to form an enzyme;

(d) a hydraulic pulper ~~having means~~ disposed at an outlet of the conditioning and reaction chamber for elementarizing the inoculated mass and soaking the inoculated mass with an enzyme extracting fluid to form a suspension;

(e) a hammer mill connected to the hydraulic pulper means for elementarizing a vegetative material, breaking up stem knots of the vegetative material, pulverizing leaves of the vegetative material and detaching bast from wood of the vegetative material;

(f) a rotating tumbler ~~means~~ connected to the pulper for separating a various fraction of the vegetative material wherein said rotating tumbler means comprises a reel and a counter reel;

(g) a rotor compactor means disposed at an outlet of the tumbler for reducing a volume of the vegetative mass and removing

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a majority of air contained in the vegetative mass to form a compacted vegetative mass;

(h) a second screw means connected to the rotor compactor for mixing the compacted vegetative mass with water and an extract containing the enzyme in a sterile environment;

(i) a second conditioning and reaction chamber disposed adjacent the second screw means ~~having means~~ for mixing and handling a mixture of the vegetative mass and the extract containing the enzyme in a sterile environment with a controlled temperature, pH and atmosphere comprising CO₂ and O₂ to form a second conditioned and reacted vegetative mass; and

(j) an apparatus means connected with the second conditioning and reaction chamber for bleaching the second conditioned and reacted vegetative mass and for disposing of a refluent.

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Claim 5 (Currently Amended): The apparatus of claim 4, wherein at least one of said first screw means and said second screw means further comprises:

- (a) a hollow coil means for internally circulating a thermostatic fluid;
- (b) a sensor means connected to the coil for controlling an instrument; and
- (c) a means within the coil for homogeneously distributing a suitable pH corrective and additive.

Claim 6 (Currently Amended): The apparatus according to claim 4, wherein said first and second conditioning and reaction chambers further comprise:

- (a) a tilting axis screw means for controlling a reaction progress and speed, keeping a reaction mass in constant movement and controlling a duration time of the reaction mass in the

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chamber, wherein said tilting axis screw means has an adjustable tilt angle rotation speed and transverse speed; and

(b) a bridge crane means for translating said tilting axis screw means along a surface of the chamber.